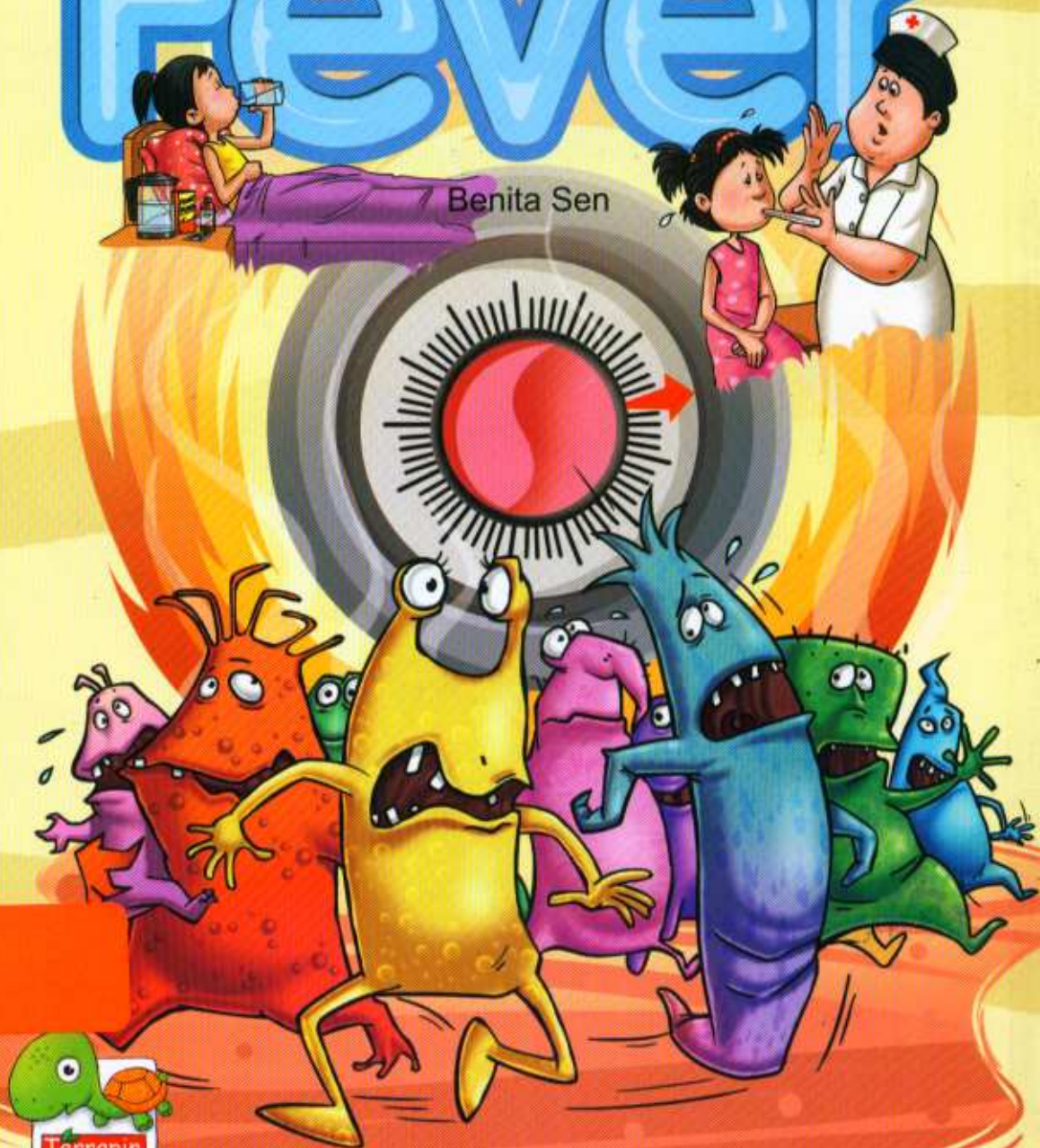


Get Well Soon

Fever

Benita Sen



A note by Dr R K Pachauri

Human beings have made great progress in recent years. We have been able to produce a large number of goods and services on a huge scale, and have utilized technology in a wide range of activities. However, all this has come at an increasing cost which has often remained concealed or ignored. Our bodies of water have been polluted. The air around us has a large amount of particulate matter and gases that are not only harmful for our health but also affect the climate of the earth. Overall, we have neglected to take care of planet earth which is home to all of us and all other living species.

Economic development is meant to ensure a higher level of human welfare in this generation as well as for others yet to come. But we know from everything we see around us that water borne and air pollution related diseases are increasing. We can conclude that while we try to give our children a better life, we also harm their health in actual fact.

This series takes a look at some of the common ailments children suffer from, such as stomach problems, allergies, injuries, and fever. While these are all part of growing up, they are becoming a cause of concern, to both parents and their children, primarily because pollution has aggravated these maladies. The books not only focus on the science behind the causes of these ailments; they also point out ways to avoid them. Above all, the objective is to take the scary element out of these common maladies and ensure that the growing-up years are full of fun. Those who read these books would learn how to lead healthy and happy lives.



R K Pachauri

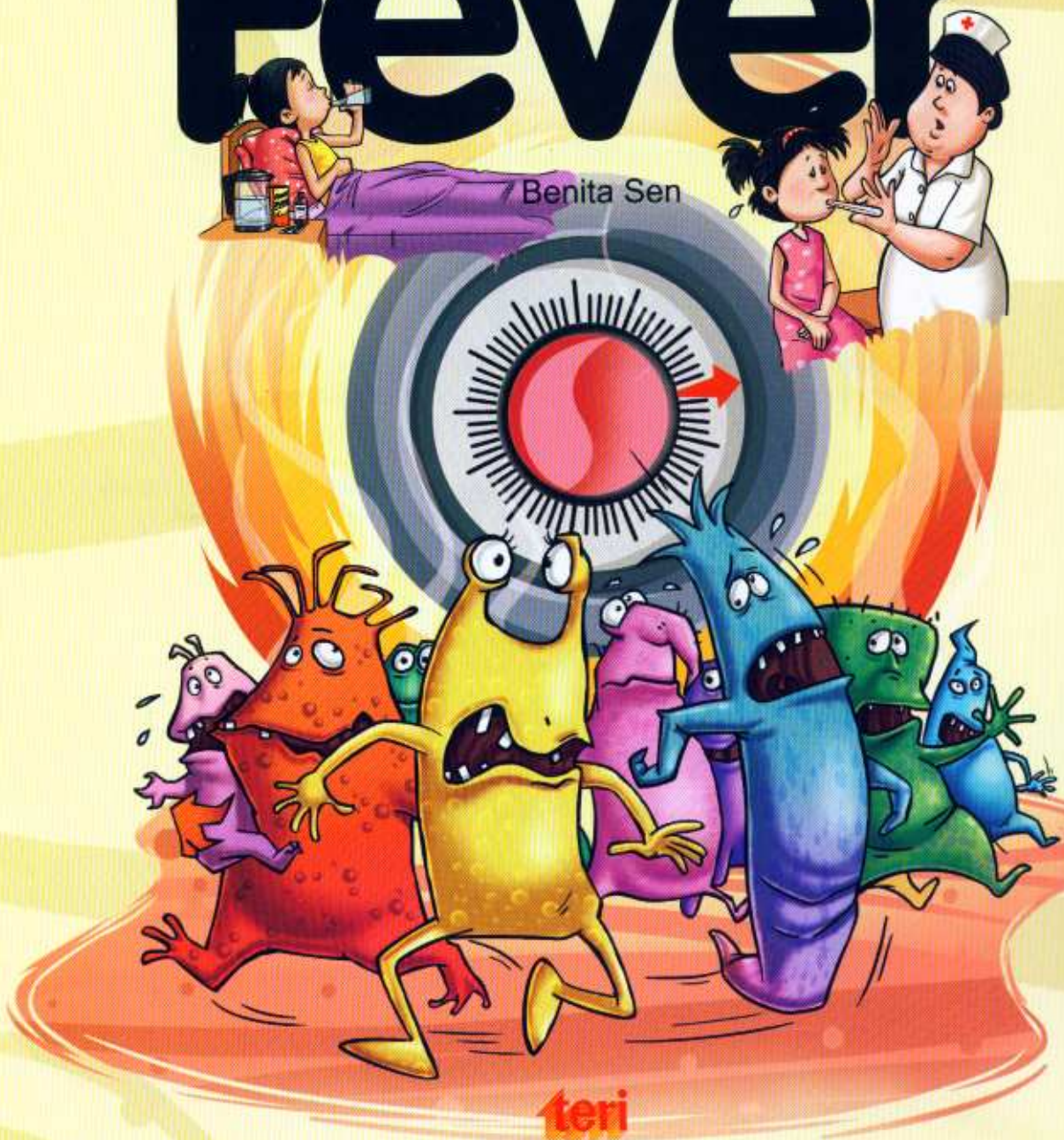
Director-General, TERI

Chairman, Intergovernmental Panel on Climate Change

Get Well Soon

Fever

Benita Sen



teri

The Energy and Resources Institute



An imprint of The Energy and Resources Institute

© The Energy and Resources Institute, 2012

First published in 2012 by
The Energy and Resources Institute
TERI Press

Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi 110 003, India
Tel. 2468 2100/4150 4900, Fax: 2468 2144/2468 2145
India +91 ■ Delhi (0)11

Email: teripress@teri.res.in ■ Website: <http://bookstore.teriin.org>

ISBN 978-81-7993-316-9

ISBN 978-81-7993-319-0 (set of 4 titles)

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

All export rights for this book vest exclusively with The Energy and Resources Institute (TERI). Unauthorized export is a violation of terms of sale and is subject to legal action.

Publishing Head: Anupama Jauhry

Editorial and Production Teams: Rupak Ghosh, Himanshi Sharma; R K Joshi, R Ajith Kumar, Aman Sachdeva

Design and Illustration Teams: Santosh Gautam; Yatindra Kumar, Vijay Nipane

Thanks to Dr Preetha (IIHMR) for reviewing the manuscript.

Disclaimer: This book has been reviewed by a medical practitioner and is meant for general educational purposes only. It should not be considered as a substitute for medical advice. The information provided in this book should not be relied upon to make decisions about a child's health. The family doctor should always be consulted about individual condition(s) and/or circumstances.

Exclusively distributed in India by Goyal Publishers and Distributors Pvt.Ltd.

Printed and bound in India

This book is printed on recycled paper.



CONTENTS

Feeling Hot, Hot, Hot!	04
The Tiny Troublemakers	06
Frog in your Throat!	08
Bad, Bad Virus!	10
Other Fevers	12
Enter, the Doctor	14
Getting Better	16
Meet your Medicine	18
Guard against Germs	20
Guessing Game	22
Words to Remember	24





FEELING HOT, HOT, HOT!



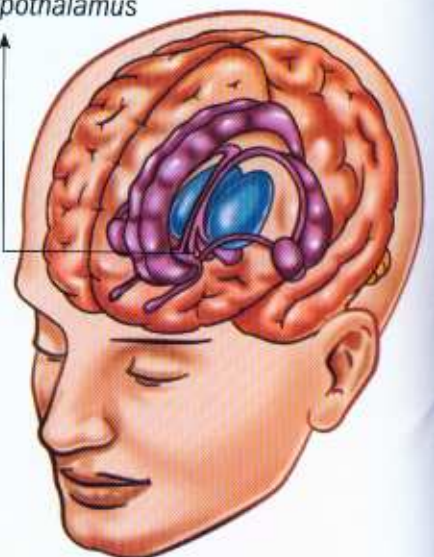
How strange! You know it is a hot summer day. All your friends are feeling warm, but you feel cold! In fact, you feel awful.

You put your head down on the desk. Your teacher comes up to your seat and feels your forehead. "You are running a fever", she says. How does she know that? When she touched your forehead, it felt warm.

By the time you are taken to the sick bay, you are shivering. The nurse puts a thermometer under your tongue, and waits for a while. She then takes it out,

The hypothalamus is as small as a pearl.

Hypothalamus





A thermometer is a sealed glass tube with mercury inside.

checks the reading, and tells your teacher, "101. I shall inform her parents". What the nurse means is that your body's temperature has touched 101 degrees Fahrenheit (101 °F).

When we are fit and fine, our body temperature is about 98.6 °F. Body temperature, or how hot or cold your body is, is controlled by a part of your brain, called the hypothalamus. When your hypothalamus gets to know that naughty germs have invaded your body, it makes your body warmer than normal.

FEVER FACTS

Each animal has a different 'normal' body temperature. In adult dogs, it remains between 100.5 °F and 102.5 °F, while in cats, the normal body temperature is from 100 °F to 102.5 °F.

A thermometer under your tongue for three minutes is all it takes to know your body temperature.



'SHOO' THE FLU

I feel pretty awful,
Now, don't ask me why.
It's warm but I'm shivering,
I need a good, long cry.



04-05

THE TINY TROUBLEMAKERS



When your parents come to know you are running a fever, they will take you to a doctor. This is because fever is a signal from your body that tiny creatures, called germs, have attacked it. The best way to fight these germs is to take help from a doctor.

The germs that invade your body can be of different types, and they can make you sick in different ways. Some of them are called bacteria. Others are called viruses. Even though both are germs, bacteria are different

FEVER FACTS

All viruses are harmful, but many bacteria are useful to us. The Lactobacillus bacteria live inside our stomach and help us digest the food we eat.

from viruses. Bacteria are bigger than viruses. Also, a virus can only grow inside living beings like plants, people, and animals.

When attacked by germs, your body fights back by making itself hotter than normal. That is what we call a fever. Most germs feel uncomfortable when it gets too hot. Your body knows that and warms itself up to tell the germs to leave.

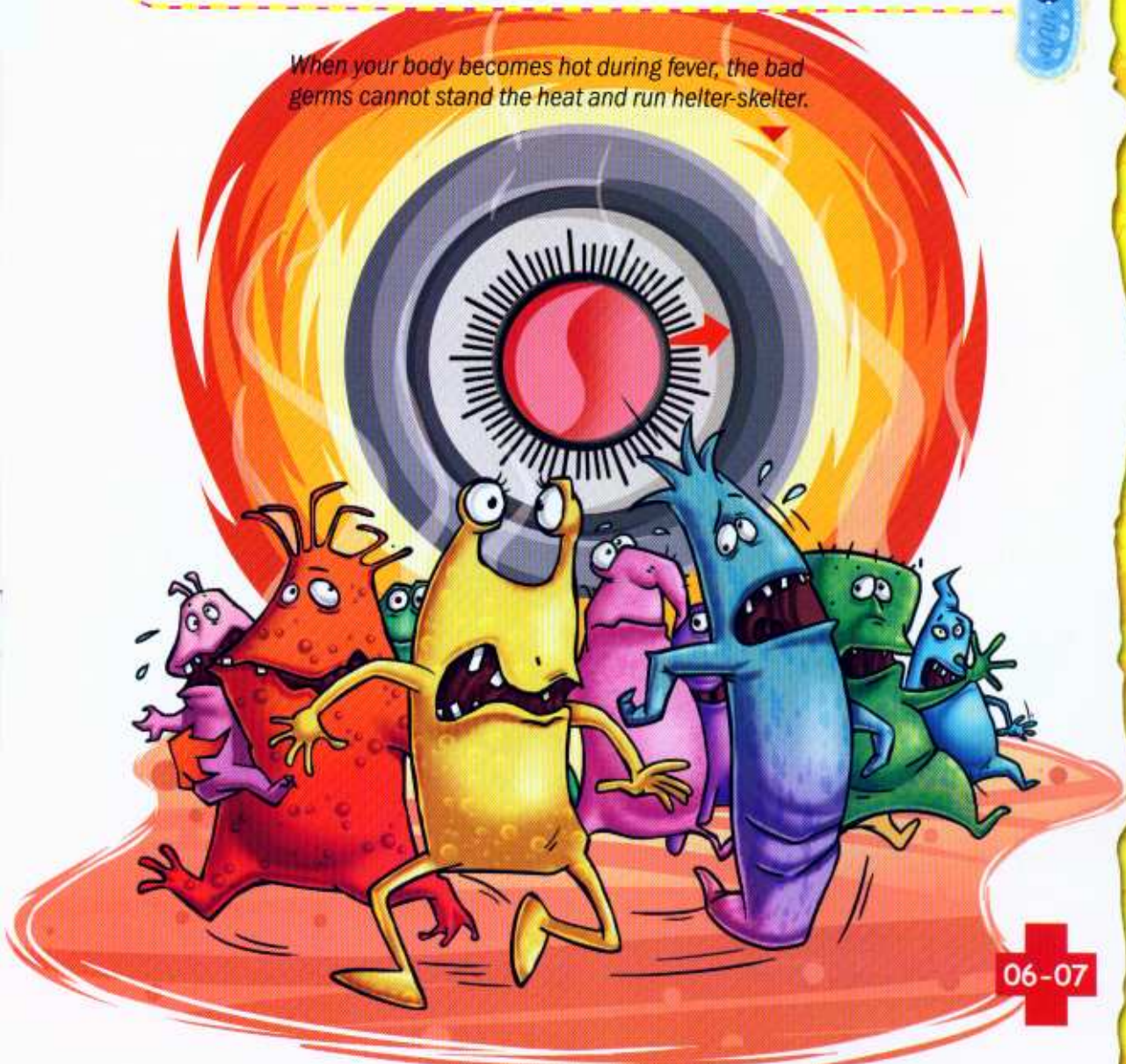


'SHOO' THE FLU

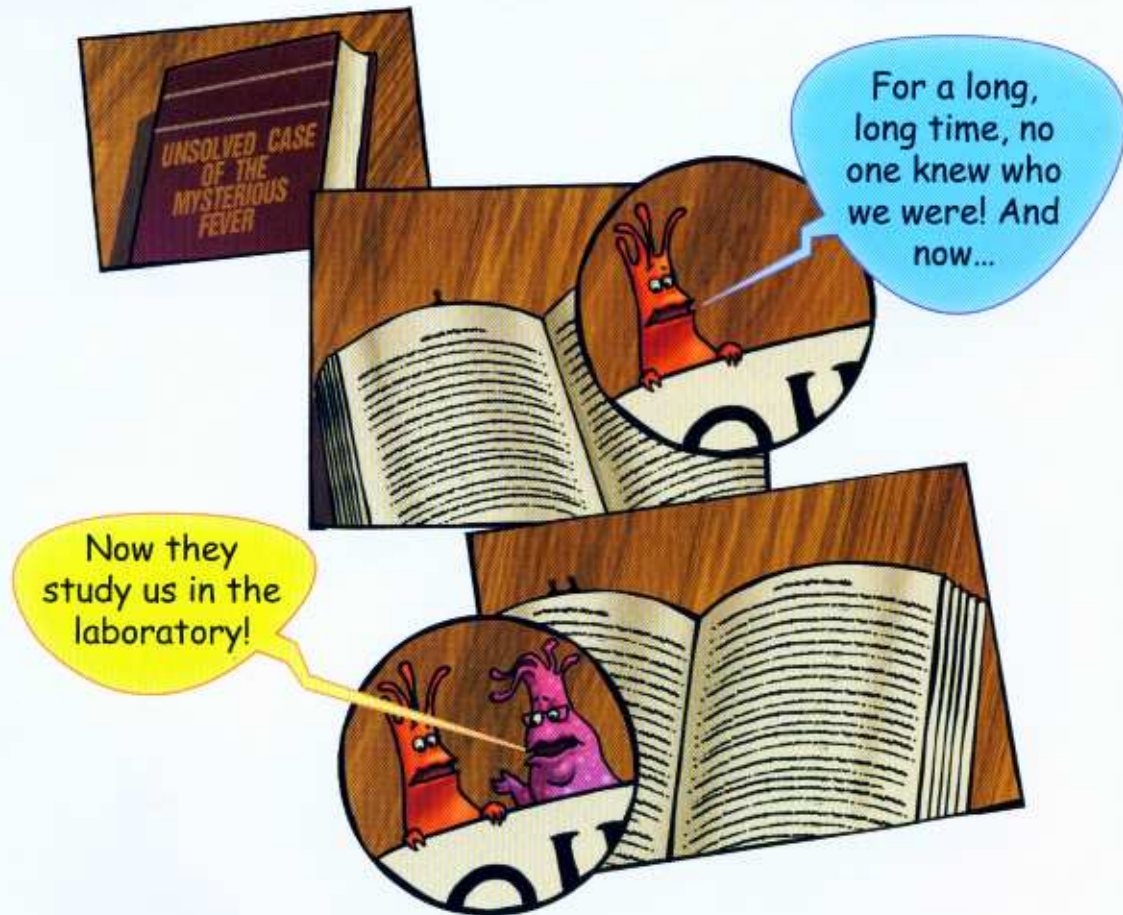
Fever makes my body warm, but it leaves me cold.
It's caused by naughty germs that are nasty, mean, and bold.



When your body becomes hot during fever, the bad germs cannot stand the heat and run helter-skelter.



FROG IN YOUR THROAT!



Sometimes, you wake up in the morning with a sore throat and slight fever. Your throat hurts when you swallow. When you try to tell your mother that your voice comes out strange, she smiles and says, "You have got a frog in your throat!"

Frog? Eeeks! How did it get in there?

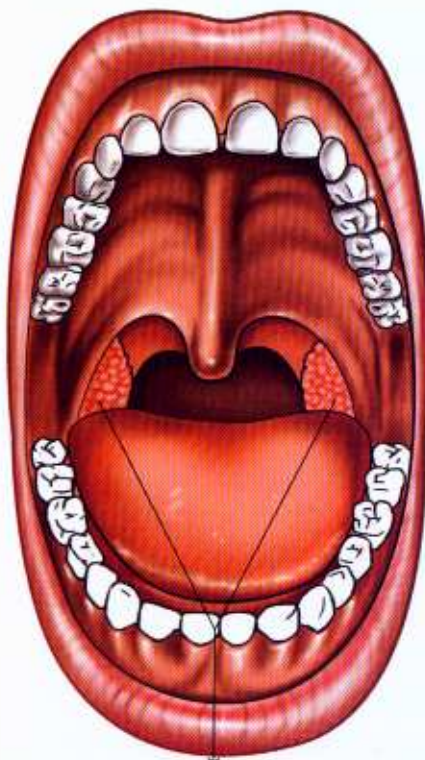
Chill. What your mother means is that germs have attacked your throat. When you go see a doctor, she may ask you to open your mouth wide. This is because she wants to check which part of your throat is infected by germs.

The most common reason for a painful throat is an infection at the back of the throat (the pharynx). It can cause the tonsils, two fleshy lumps at the back of the pharynx, to become red

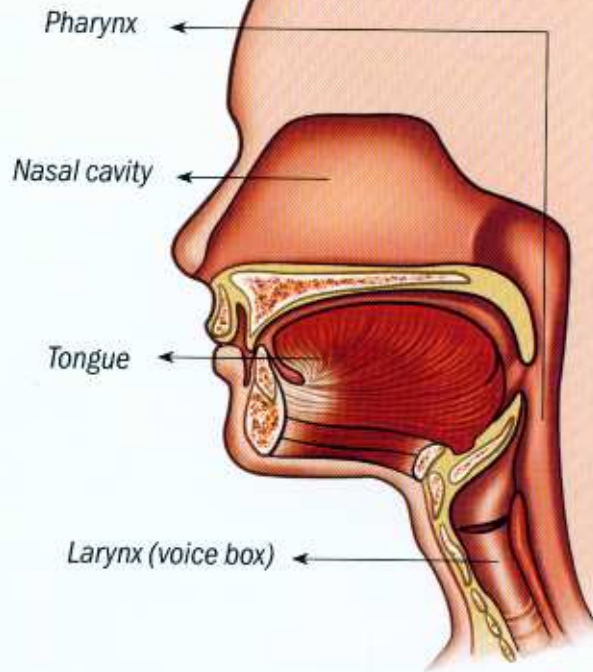
FEVER FACTS

Bacteria called streptococci, or strep, are one of the most common causes of pharynx infection. If you do not take medicines in time, strep can attack you in other places, too. It can give you achy bones, and sometimes even harm the heart.

Tonsils fight infection, but can get infected themselves and swell up.



Tonsils



The pharynx lies behind your mouth and an area behind your nose called the nasal cavity.



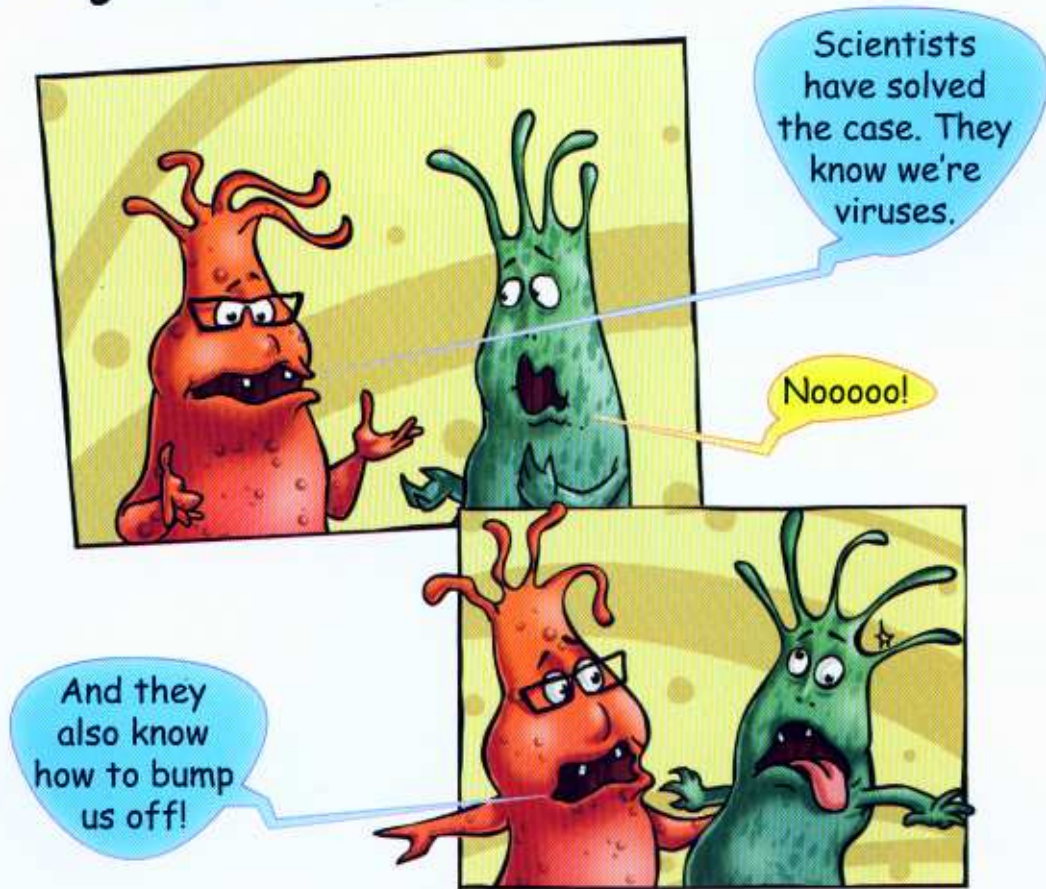
'SHOO' THE FLU

Bacteria may be tiny
But some are really mean.
They can make you very ill,
Although they're seldom seen!



and swollen. This could be caused by bacteria or viruses, from pollution or because your body does not like a particular chemical, say, in paint.

BAD, BAD VIRUS!



If you have a cough and a runny nose, your whole body aches, and you feel just awful, the doctor may tell you it is because of a virus. Viruses can also cause stomach infection, and give you an upset stomach and fever.

Most viruses hide inside the food you eat or in the water you drink. Once they are inside your body, they grow in number and start infecting it. As the infection spreads in your body, you will start feeling tired easily, the muscles in your body will begin to ache, and you will feel feverish. Be warned. These are signs of a viral fever!

Even the common cold, which leaves you with a running nose, cough, sore throat, and fever, is caused by a virus. One of the most common viruses is influenza (or flu). It gives you a sore



'SHOO' THE FLU

A virus is another pest
I don't like it at all!
It can bring along a fever,
That makes me want to bawl.



FEVER FACTS

Almost all of us get chicken pox when we are small. In this disease, a virus causes small, itchy, red spots to suddenly appear on your body. Very soon, your stomach and head may begin to ache, and you will have fever and a sore throat.

throat and fever, makes you feel cold, your head hurts, and you start feeling wobbly.

Some viruses like chicken pox latch on to you directly. Others like the Chikungunya virus first enters insects like the mosquito. When the infected mosquito bites someone, it passes on the virus to that person.



▲ Wet sponge is often used to bring down fever.



▲ Cough, sore throat, and a runny nose are all symptoms of flu.



▲ Chicken pox is caused by a virus called varicella zoster.

OTHER FEVERS



I hate exams!



I think I'll tell my friends I have fever!



But where shall I find bacteria or virus?

A fever could also mean an infection anywhere in the body, which can take the form of a boil or an abscess. A boil means an infected tissue. Our body is made up of millions of cells. When cells of the same kind join together, they form a tissue. Sometimes, germs attack, infect, and destroy tissues, leaving a hole behind.

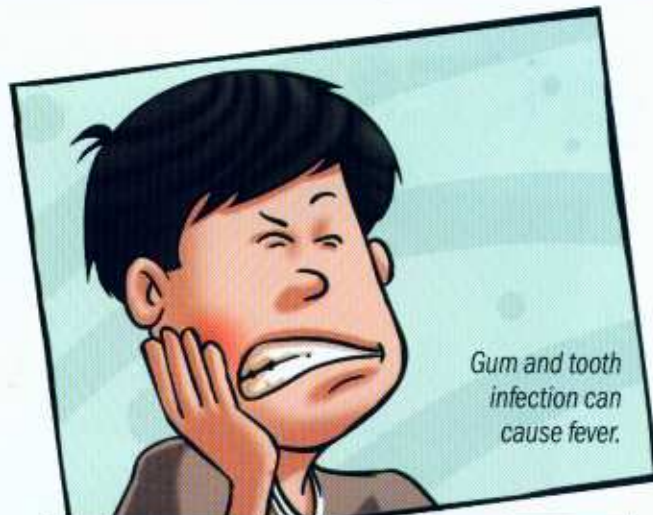
FEVER FACTS

You could feel feverish if you stay out in the sun for too long. On a very hot day, your body may take in more heat than normal. Also, you sweat a lot and your body loses more water than it should. Result: a fever called heat stroke.

This hole gets filled with a thick liquid called pus. This pus-filled infected hole is a boil.

A painful, infected tooth or an ear infection can also give you fever. But sometimes, fever can be a lot more serious. It could be typhoid, which is an infection in the stomach area caused by a bacteria called *Salmonella typhi*. Besides fever, typhoid brings pain in the stomach, vomiting, and headache.

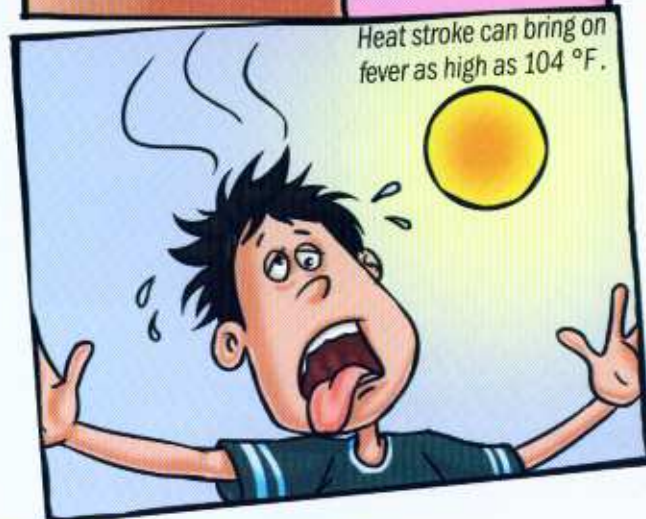
Bites from insects like the poisonous Black Widow spider or a fire ant can also cause fever. When an insect bites, it pushes poison into your body. If the poison is strong, the body brings on fever to fight it. The good news is that such fevers are rare.



Gum and tooth infection can cause fever.



An ear infection can mean difficulty in sleeping, pain, and fever.



Heat stroke can bring on fever as high as 104 °F.



'SHOO' THE FLU

A fever is a friend, you see, that warns me of a germ. The germ could be a virus or even a stomach worm.





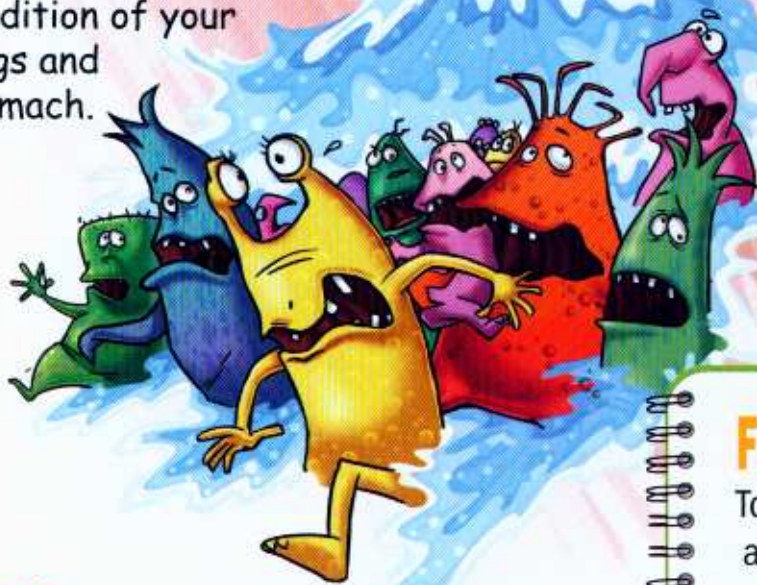
ENTER, THE DOCTOR



In the fight against fever, the doctor and you are teammates. But before you go to the doctor, it is always a good idea to sit with your parents and make a list of what you have eaten or done in the last few days. Note down how you feel. Does your head hurt? Does one part of your stomach ache? These are all clues for the doctor to make you get better.

The doctor will check your temperature with a thermometer. She will check your pulse, which is the beating of your heart that

you can feel if you place a finger on an artery. If you have an infection, then your heart beats faster. The doctor may also place a stethoscope on your chest. It is a special machine, with which she can hear sounds inside you, like your heartbeat. The stethoscope also tells her about the condition of your lungs and stomach.



The flu vaccine contains the dead flu virus that scares the flu viruses in your body away!



'SHOO' THE FLU

The doctor checks my fever,
She knows me inside out.
She'll surely make me better,
So that I can run about.



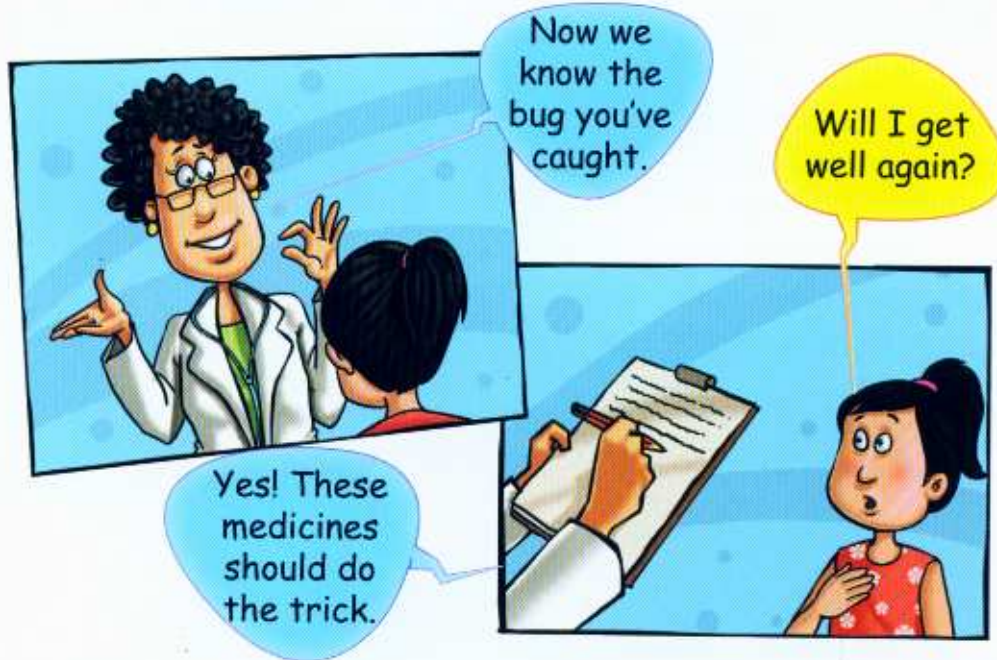
FEVER FACTS

To keep influenza away, the doctor may give you a 'flu shot'. It is a vaccine that contains the 'flu virus'. The shot is usually injected into your arm.

If your throat hurts, the doctor will peer into your mouth to see where the infection is. If you have a stomach ache, she will feel around your stomach and ask you where it hurts. If she is still not sure, she might ask you to take some tests that will pin down the cause of the infection.

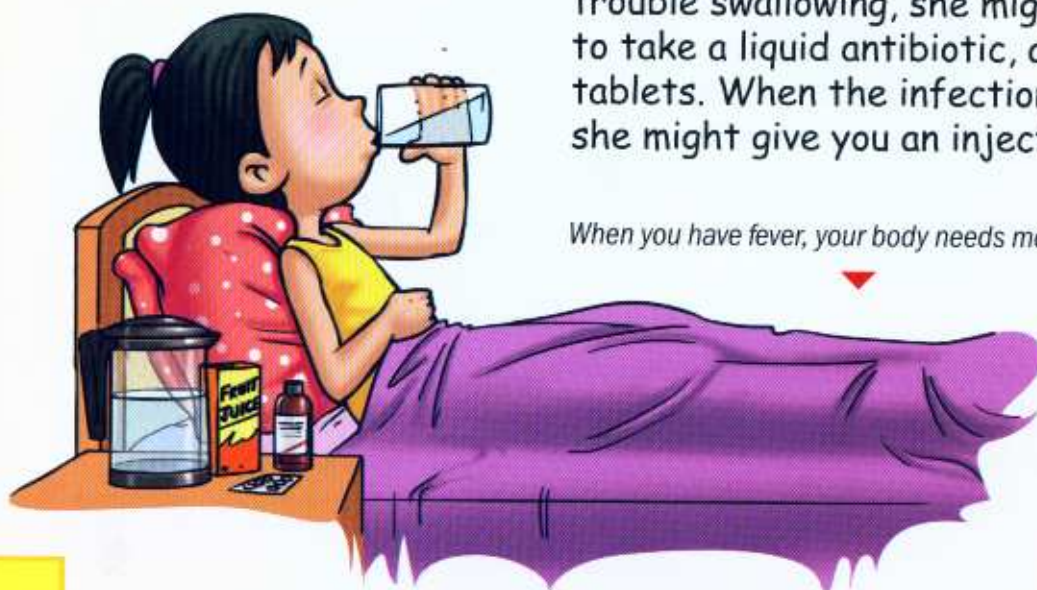


GETTING BETTER



Once the doctor knows which germs have attacked you, she will give you medicines to drive them out.

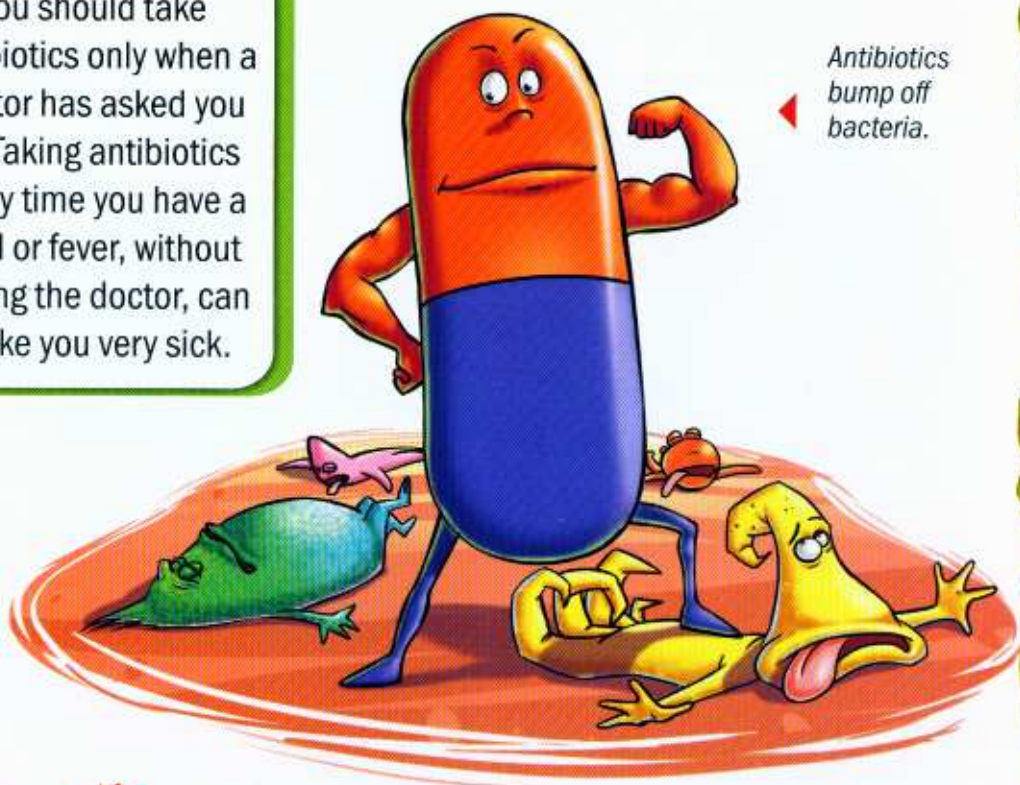
If your fever is because of a bacterial attack like strep, she will write down the name of an antibiotic. It is a medicine that kills bacteria. If you are having trouble swallowing, she might ask you to take a liquid antibiotic, and not tablets. When the infection is bad, she might give you an injection.



When you have fever, your body needs more fluids.

FEVER FACTS

You should take antibiotics only when a doctor has asked you to. Taking antibiotics every time you have a cold or fever, without asking the doctor, can make you very sick.



Antibiotics
bump off
bacteria.



'SHOO' THE FLU

Will I need medicines?
Or will the fever just go?
Let's see what the doctor says,
She's the one who knows!



The medicines start working fast and you should feel better in a day or two. Even then, you should keep taking the medicines for as long as the doctor has asked you to.

If you have a viral attack, the doctor will probably write out fewer medicines. This is because most viral infections get cured on their own in about a week. The doctor may give you medicines to bring down the fever and body ache. You will need to rest and should drink lots of water, soup, and juice.



MEET YOUR MEDICINE



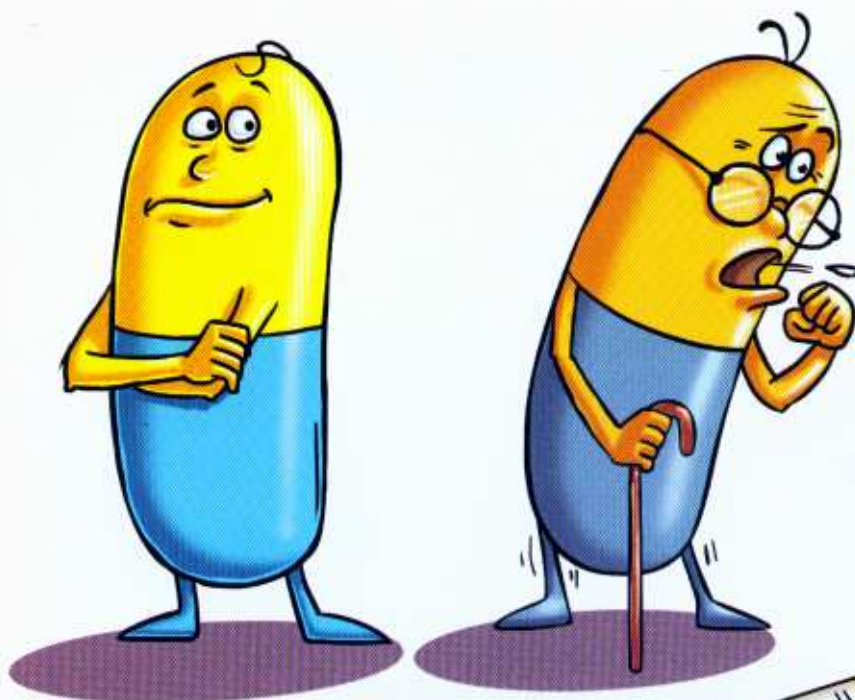
Do you like pink medicines? Do you have a smile on your face when the doctor asks you to take a strawberry-flavoured syrup?

Did you know the colour and taste of a medicine do not mean much? They are added only to make the medicine easier to swallow!

Different medicines kill different germs. But some, like the tablets you take when you have a headache, do not fight any germ! They just help you feel better. Once you swallow any medicine, it mixes

FEVER FACTS

Medicines that cure aches and pains are known as analgesic. Those that fight fever are called antipyretic.



Taking old medicines can harm you. Always check the expiry date printed on tablet strips and on medicine bottles.

with the juices in your stomach. These juices then flow the medicine into the blood so that it can spread throughout your body.

Always check the expiry date of a tablet or syrup. Expiry date is the date, after which a medicine is no longer effective or safe. Old medicines might be weak to fight for you. In fact, they can make you more ill. You should also take just the dose (amount) of medicine that your doctor has prescribed. Too little, and the germs may not die. Too much, and you can get even more sick.



'SHOO' THE FLU

Here come the medicines...

Hey germs, watch out!
Better leave me right away,
Or you'll get knocked out.





GUARD AGAINST GERMS

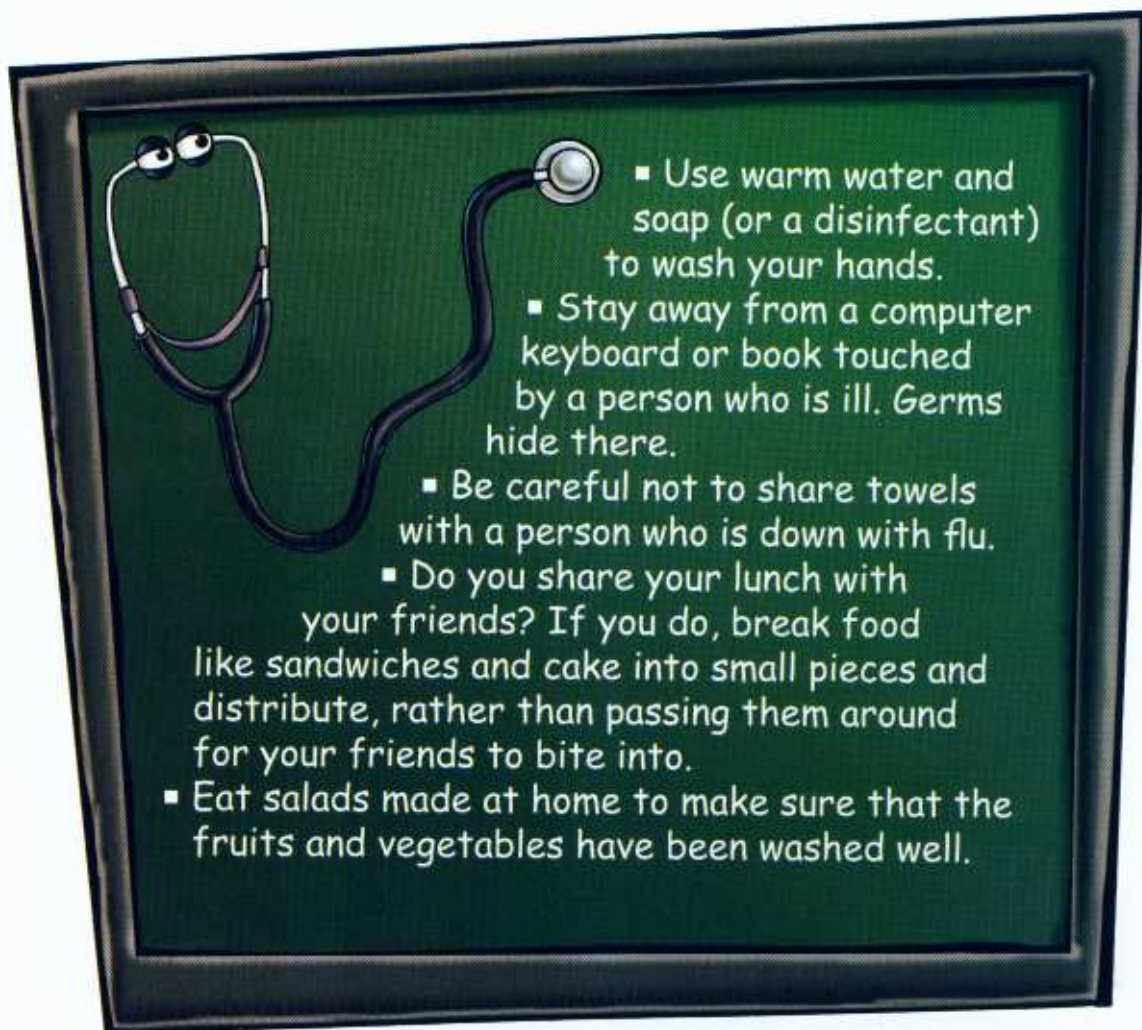


You can protect yourself from bacteria and viruses if you know how to keep these germs away. Here are some simple ways to easily do just that.

Try to stay clear of people sneezing or coughing, especially if they do not cover their nose and mouth with a handkerchief or tissue. If you have cold or a bad throat, always cover your mouth and nose when you cough or sneeze. This way, you will not allow the infection to spread to others.

FEVER FACTS

If you are infected by the flu virus, you can start spreading the germs around, even before you start feeling ill.



'SHOO' THE FLU

Keep your germs to yourself
If you cough or sneeze.
Take care not to spread them around
I don't want them, please!



Wash your hands frequently, especially before eating.
Keep your hands away from your eyes, mouth, and nose.
If someone else at home has a viral infection, it is better to wash his/her dishes separately, since germs lurk in dishes, forks, and spoons.



GUESSING GAME

1. You don't get this disease from chickens, but you do get fever:

C E O

2. One bite from this ant can make you feverish:

I

3. It tells you your body temperature:

H R T

4. Want to hear your heart beat? Use this machine:

S T S O

5. These tiny germs live and grow only inside living beings:

U

6. This part of your brain controls your body's temperature:

O T A A S

7. A medicine that kills harmful germs like bacteria is called:

A I I C

8. The back of your throat is known as:

P _ _ _ _ Y N _

9. Always check this date, which is printed on a medicine bottle or on a tablet strip:

_ X _ _ _ Y

D A T E

10. This bad bacteria causes typhoid:

_ A _ M _ _ E _ L _

T Y P H I

Answers:

1. CHICKEN POX
2. FIRE
3. THERMOMETER
4. STETHOSCOPE
5. VIRUS
6. HYPOTHALAMUS
7. ANTIBIOTIC
8. PHARYNX
9. EXPIRY
10. SALMONELLA

WORDS TO REMEMBER



- Hypothalamus: the part of your brain which controls the temperature of your body
- Pharynx: back of your throat
- Pulse: beating of your heart that can be felt by placing a finger on an artery
- Temperature: measurement of how hot or cold your body is
- Tonsils: two fleshy lumps at the back of your throat
- Symptoms: indications of a disease



This is a **GREEN** book



Fever



F-e-v-e-r. Five feared letters. Sometimes you shiver, though it is hot. At times, the fever brings with it a sore throat and a runny nose. Sometimes, your whole body aches. But, did you know that fever is your body's mechanism of driving naughty germs away by warming itself up? Were you also aware that bacteria cause a painful throat or that a flu vaccine contains the dead flu virus? Packed with useful information, this book deals with the causes and symptoms, as well as the safety measures to control fever. Most importantly, it takes the fear out of those five letters.

Other books in this series

Allergies
Injuries
Stomach problems

Ages: 6-8

ISBN 978-81-7993-316-9



9 788179 933169
₹ 95

teri

The Energy and Resources Institute

This book is printed on recycled paper.